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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 068,841	02/11/2002	Keiji Emoto	00862.022517	8954

5514 7590 05/30/2003

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EXAMINER
MOHANDESI, IRAJ A

ART UNIT PAPER NUMBER
2834

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,841

Applicant(s)

EMOTO, KEIJI

Examiner

Iraj A Mohandesi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-21 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-20, drawn to a linear motor, classified in class 310, subclass 12.
 - II. Claim 21, drawn to manufacturing method, classified in class 29, subclass 627.The inventions are distinct, each from the other because of the following reasons:
 2. Inventions 1 and 2 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the surface of a linear motor can be coated in several process such as anodizing or electro film processing and also applying photosensitive agent and developing the exposed substrate can be used to manufacture deferent products such as circuit printed board. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
3. During a telephone conversation with Applicant representative Mr. Jacobs a provisional election was made on May 19, 2003 without traverse to prosecute the invention of 1, claims 1-20. Affirmation of this election must be made by applicant in

replying to this Office action. Claim 21 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1,2,6-10,17** are rejected under 35 U.S.C. 102(b) as being anticipated by **Korenaga US patent 6,107'703**.

Korenaga'703 discloses a linear motor (see Fig.1) comprising a stator (11,column 3 ,line 54, Fig.1) a movable element (2 column 3,line 48, Fig.1) movable relative to said stator and a metal film (column 10,line 45) formed on a surface of at least one of said stator and said movable element, said stator has a coil (6,7, see Fig.1), and said movable element has a magnet (4-1,4-2,4-3,4-4, Fig.1B).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3-5,18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Korenaga'703** in view of **Li US patent 6,417,914** and further in view of skill in the art.

Korenaga'703 discloses a linear motor (see Fig.1) comprising a stator (11,column 3, line 54, Fig.1) a movable element (2 column 3, line 48, Fig.1) movable relative to said stator and a metal film (column 10, line 45) formed on a surface of at least one of said stator and said movable element, said stator has a coil (6,7, see Fig.1), and said movable element has a magnet (4-1,4-2,4-3,4-4, Fig.1B).

However **Korenaga'703** teaches all limitation of the claim invention except a cooling system in vacuum environment and the metal film "coating" ~~which~~ is provided by different metals.

Li,914 discloses a stage device and exposure apparatus having coil covered with flat plate shaped member (68, column 14, line 18, Fig4) for supplying a refrigerant that cools the coil and metal film is formed on a surface of at least said stator, a chamber surrounding said stage (22,23,42 see Fig.1) and a vacuum mechanism (column 28, line 3) for the purpose of reducing the generated heat in the stator coil, in addition said apparatus can be uses as an electron beam exposure apparatus (column 27, line 57-67).

Therefore it would have been obvious to one having skill in the art at the time the invention was made to combine **Korenaga'703** linear motor with a cooling system and vacuum mechanism as taught by **Li, 914** for the purpose of reducing the generated heat in the stator coil.

With respect to **claims 11-15**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use different material for plating such as nickel or gold as a nonmagnetic material with a thickness of 10 micro m to 30 micro m ,since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the indented use as a matter of obvious design choice in re Leeshin 125 USPQ 416. and also it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art .In re Boesh, 617 F.2d 272,205 USPQ 215 (CCPA).

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

IM
May 19, 2003

